

## **SUPPLEMENTAL BID BULLETIN No. 08G-2022**

# **PROJECT 2022-08G: Upgrading of Campuses Backbone to Fiber Optic**

This Bid Bulletin/Addendum No.08G-2022 is issued to modify or amend items in the Bidding Documents of the abovementioned project of the University. This shall form an integral part of the Bidding Documents of the said project.

Please be informed of the changes in the project:

DARTICUL ARC	CHANGES	
PARTICULARS	FROM	ТО
	PARTICULARS	PARTICULARS
Section VI. Schedule of Requirements	Delivery Period: 30 Calendar Days	Delivery period: 60 calendar days.
	NETWORK INFRASTRUCTURE,	NETWORK INFRASTRUCTURE,
	Smart	Smart
Section VII.	Campus -	Campus -
Technical Specifications	Upgrade to Fiber Backbone for both Campuses. Provision of Design, Supply, Delivery of complete materials/accessories, and complete Installation of Aerial mounted campus network connectivity up to 10Gbps Fiber Optic Cable with 35 terminations (4 cores each termination, 23 terminations for Bayombong and 11 Bambang) + 1 optional termination Length of Fiber for each termination (meters - estimated measurement)	Upgrade to Fiber Backbone for both Campuses. Provision of Design, Supply, Delivery of complete materials/accessories, and complete Installation of Aerial mounted campus network connectivity up to 10Gbps Fiber Optic Cable with 35 terminations (4 cores each termination, 23 terminations for Bayombong and 11 Bambang) + 1 optional termination Length of Fiber for each termination (meters - estimated measurement)
	Outdoor Self-supporting Fig.8 Unitube Light Armored Optical Fiber Cable, Steel Tape, 4 Core Single Mode.	Outdoor Self-supporting Fig.8 Unitube Light Armored Optical Fiber Cable, Steel Tape, 4 Core Single Mode.
	Technical Parameters: loose tube	Technical Parameters: loose tube
	2.50mm, message wire 3.0mm, cable	2.50mm, message wire 3.0mm, cable
	diameter 8.1 x 15.9, cable weight 127	diameter 8.1 x 15.9, cable weight 127
	kg/km, short/long term crush	kg/km, short/long term crush resistance
	resistance 1000/300 N/100mm,	1000/300 N/100mm, long/short term
	long/short term tensile strength	tensile strength 1500/4000 N, bending

1500/4000 N, bending radius static/dynamic 10D/20D mm, fiber type G.652D, Applications aerial / drop cable, Compliance: ISO/IEC11801:2008 ANSI/EIA-568-C.3 TIA598-C EN50173:2002 ITU G.652D @1000m/drum (1 lot) Outdoor Self-supporting Fig. 8 Stranded Light Armored Optical Fiber Cable, Aluminum Tape, 12 Core Single Mode, G542D, Technical Parameters: fiber count 12, cable diameter 9.2\*17.2 mm, cable weight 161 Kg/km, long/short term crush resistance 600/1500 N/100mm, long/short term tensile strength 300/1000 N, bending radius static/dynamic 10D/20D mm, fiber type G.652D, Applications aerial / drop cable. Compliance: ISO/IEC11801:2008 ANSI/EIA-568-C.3 TIA598-C EN50173:2002 ITU G.652D @1000m/drum (1 lot)

Light Armored Optical Fiber Cable, Aluminum Tape, 48 Core Single Mode, G542D, Technical Parameters: fiber count 48. cable diameter 10.0\*18.0 mm, cable weight 172 Kg/km, long/short term crush resistance 600/1500 N/100mm, long/short term tensile strength 300/1000 N, bending radius static/dynamic 10D/20D mm, fiber type G.652D, Applications - aerial / drop cable. Compliance: ISO/IEC11801:2008 ANSI/EIA-568-C.3 TIA598-C EN50173:2002 ITU G.652D

Outdoor Self-supporting Fig. 8 Stranded

This FOC also includes the SFP Modules with the following specifications;

@1000m/drum(1 lot)

radius static/dynamic 10D/20D mm, fiber type G.652D, Applications aerial / drop cable, Compliance: ISO/IEC11801:2008 ANSI/EIA-568-C.3 TIA598-C EN50173:2002 ITU G.652D @1000m/drum (1 lot) Outdoor Self-supporting Fig. 8 Stranded Light Armored Optical Fiber Cable, Aluminum Tape, 12 Core Single Mode, G542D, Technical Parameters: fiber count 12, cable diameter 9.2\*17.2 mm, cable weight 161 Kg/km, long/short term crush resistance 600/1500 N/100mm, long/short term tensile strength 300/1000 N, bending radius static/dynamic 10D/20D mm, fiber type G.652D, Applications aerial / drop cable. Compliance: ISO/IEC11801:2008 ANSI/EIA-568-C.3 TIA598-C EN50173:2002 ITU G.652D @1000m/drum (1 lot)

Outdoor Self-supporting Fig. 8 Stranded Light Armored Optical Fiber Cable, Aluminum Tape, 48 Core Single Mode, G542D, Technical Parameters: fiber count 48. cable diameter 10.0\*18.0 mm, cable weight 172 Kg/km, long/short term crush resistance 600/1500 N/100mm, long/short term tensile strength 300/1000 N, bending radius static/dynamic 10D/20D mm, fiber type G.652D, Applications - aerial / drop cable. Compliance: ISO/IEC11801:2008 ANSI/EIA-568-C.3 TIA598-C EN50173:2002 ITU G.652D

This FOC also includes the SFP Modules with the following specifications;

@1000m/drum(1 lot)

10G SFP+ Fiber Transceiver - Single-10G SFP+ Fiber Transceiver - Single-Mode Mode 10Km (70 10Km (70 units), units), 1000Base-LX SFP Fiber Transceiver -1000Base-LX SFP Fiber Transceiver -SingleMode SingleMode 20Km (10 units), 20Km (10 units), 40G QSFP+ Direct Attach Copper Cable -40G QSFP+ Direct Attach Copper Cable meters in length (2 units), meters in length (2 units), 10G SFP+ Directly attached Copper Cable 10G SFP+ Directly attached Copper Cable - 2 meters in length (2 units), - 2 meters in length (2 units), LC/APC Single Mode Duplex Adaptor LC/APC Single Mode Duplex Adaptor (552 units), (552 units), LC/APC Single Mode Simplex Fiber LC/APC Single Mode Simplex Fiber Pigtail, 0.9mm, 1m cable length, G652d fiber Pigtail, 0.9mm, 1m cable length, G652d fiber type, with type, with LSZH jacket (228 units), LSZH jacket (228 units), LC/APC-LC/APC Single Mode Duplex LC/APC-LC/APC Single Mode Duplex Optical Fiber Patch Optical Fiber Patch Cable, Ferrule outer Cable, Ferrule outer 1.2490 +1.2490 +diameter diameter 0.0005(LC), LSZH 0.0005(LC), LSZH Sheath, G652D, 2mm (68 units), Sheath, G652D, 2mm (68 units), Dome Optic Fiber Splice Closure, Two-in Dome Optic Fiber Splice Closure, Two-in and Two-out, and Two-out, Basket Type (Tray 1x24F, 24 Core) Outer Basket Type (Tray 1x24F, 24 Core) Outer size size (H\*D) (H\*D) 420\*140mm, weight 2.9kg (18 units), 420\*140mm, weight 2.9kg (18 units), Each Fiber Termination point includes Each Fiber Termination point includes the following equipment: the following equipment: Network Cabinet 600x600x12U with Network Cabinet 600x600x12U with 2units exhaust fan and power 2units exhaust fan and power distribution unit (35 units), distribution unit (35 units), Layer 3 24-Port 10/100/1000T 802.3at Layer 3 24-Port 10/100/1000T 802.3at PoE + 4Port 10G PoE + 4Port 10G SFP+ Stackable Managed Switch, 370W, SFP+ Stackable Managed Switch, 370W, 1U 128Gbps/non-blocking switch 1U 128Gbps/non-blocking switch fabric fabric Layer 3 PoE up to 370 watts Capable of providing nonblocking switch fabric and wire-speed throughput as high as 128Gbps switching capacity/data exchange speed via Optical Fiber Interface

Capable of 10Gbps MSTP Compatible with UNINMS (Universal Network Management System Software) (35 units),

Managed Dual Band Access points, MIMO 2x2, PoE mode 24V passive PoE 802.3af PoE, maximum transmit power 2.4Ghz and 5Ghz 20dB, dimension 353x46x34.4mm, weight 152g (35 units),

2000VA/1200 Watts Line Interactive 230AC AVR Boost and Buck, Cold Start Function, USB Interface for Power Management, Builtin Self Diagnostic Function, Modem/LAN Protection/Data Line Protection, LED Panel Indicator, Fastest Charging Capacity,

Indicator, Fastest Charging Capacity, Auto- Charging at Off Mode and Auto-Restart Function, battery type sealed lead-acid 12v 9Ah x 2 units, back-up time @120W load 39minutes, dimension WxDxH 380x158x198mm, net weight 11.5kg (35units),

24-Port Optic Fiber Patch Panel (universal for ST, FC, SC, LC duplex, unloaded, without rail, 1 U. Specifications: material SPCC, surface spray, maximum bending space at least 30, maximum fiber count 48, insertion loss max 0.3 dB, return loss, at least 35, at least 60 dB (APC), Compliance: ISO/IEC 11801, ANSI /TIA 568-C.3 (35 units),

Layer 3 PoE up to 370 watts Capable of providing nonblocking switch fabric and wire-speed throughput as high as 128Gbps switching capacity/data exchange speed via Optical Fiber Interface

Capable of 10Gbps MSTP Compatible with UNINMS (Universal Network Management System Software) (35 units),

Managed Dual Band Access points, MIMO 2x2, PoE mode 24V passive PoE 802.3af PoE, maximum transmit power 2.4Ghz and 5Ghz 20dB, dimension 353x46x34.4mm, weight 152g (35 units),

2000VA/1200 Watts Line Interactive
230AC AVR Boost and Buck, Cold Start
Function, USB
Interface for Power Management, Builtin Self Diagnostic Function,
Modem/LAN Protection/Data Line
Protection,
LED Panel
Indicator, Fastest Charging Capacity,
Auto- Charging at Off Mode and AutoRestart Function, battery type sealed
lead-acid 12v 9Ah x 2 units, back-up
time @120W load 39minutes,

dimension WxDxH 380x158x198mm, net

weight 11.5kg

(35units),

24-Port Optic Fiber Patch Panel (universal for ST, FC, SC, LC duplex, unloaded, without rail, 1 U. Specifications: material SPCC, surface spray, maximum bending space at least 30, maximum fiber count 48, insertion loss max 0.3 dB, return loss, at least 35, at least 60 dB (APC), Compliance: ISO/IEC 11801, ANSI /TIA 568-C.3 (35 units),

Layer 3 24-Port 10G SFP++ 4-Port 100G QSFP28

Managed Switch with Dual 100~240V AC Redundant

Power, 1U High-density 24 10G SFP+ and 4

40G/100GbE QSFP28 Fiber interfaces delivered in a 1 RU rugged case Dual AC Redundant Power Capable of providing non-blocking 800Gbps switching capacity/data exchange speed via Optical Fiber Interface Capable of 100Gbps MSTP Solution Compatible with UNI-NMS (Universal Network Management System

Software) (4),

48-Port ODF (for 48 core LC, 96 core duplex LC, adaptor unloaded, 3U. Specifications: type 48 ports, size 482.5 x 295 x 3u mm, inner carton weight 8.6 kg, material SPCC power-coated, installation 19" standard rack-mounted, operating temperature -25OC ~ + 60 OC. Compliance: ISO/IEC 11801, ANSI/TIA/EIA 568-C.3. (3 units),

Overhead Fiber Raceways / Cable
Ladder (1 lot), Uninterruptible Power
Supply 2000VA/1800W advanced
Digital Control Technology,
doubleconversion technology,
programmable parameter setting,
emergency shutdown control through

EPO, extended runtime capability, rack/tower convertible design INPUT: voltage range

100~300Vac, phase single phase with the ground, OUTPUT: output waveform pure sine wave; BATTERY: battery type sealed lead acid maintenance-free, number of batteries 4/6, recharge time (to 90%) 4~6 hours PROTECTION; full protection overload, over-temperature, short circuit, discharge, overcharge PHYSICAL: dimensions (WDH in mm) 440 x 600 x 88 (2U), weight (kg) 22;

Layer 3 24-Port 10G SFP++ 4-Port 100G QSFP28

Managed Switch with Dual 100~240V AC Redundant

Power, 1U High-density 24 10G SFP+ and 4

40G/100GbE QSFP28 Fiber interfaces delivered in a 1 RU rugged case Dual AC Redundant Power Capable of providing non-blocking 800Gbps switching capacity/data exchange speed via Optical Fiber Interface Capable of 100Gbps MSTP Solution Compatible with UNI-NMS (Universal Network Management System

Software) (4),

48-Port ODF (for 48 core LC, 96 core duplex LC, adaptor unloaded, 3U. Specifications: type 48 ports, size 482.5 x 295 x 3u mm, inner carton weight 8.6 kg, material SPCC power-coated, installation 19" standard rack-mounted, operating temperature -25OC ~ + 60 OC. Compliance: ISO/IEC 11801, ANSI/TIA/EIA 568-C.3. (3 units),

Overhead Fiber Raceways / Cable Ladder (1 lot), Uninterruptible Power Supply 2000VA/1800W advanced Digital Control Technology, doubleconversion technology, programmable parameter setting, emergency shutdown control through

EPO, extended runtime capability, rack/tower convertible design INPUT: voltage range

100~300Vac, phase single phase with the ground, OUTPUT: output waveform pure sine wave; BATTERY: battery type sealed lead acid maintenance-free, number of batteries 4/6, recharge time (to 90%) 4~6 hours PROTECTION; full protection overload, over-temperature, short circuit, discharge, overcharge PHYSICAL: dimensions (WDH in mm) 440 x 600 x 88 (2U), weight (kg) 22;

output connections 6 x IEC-C13 (4 units),

#### **ACCESSORIES**

1U Cable Management Horizontal Mount 19-inch Server Rack, 24 Slot Metal Finger Duct Wire Organizer with Cover, Black, with cage nut (40 units),

CAT 6 UTP @ 300m (8 units), MC 6 UTP modular cords, Category 6 MC, double-ended, 4 pair UTP stranded modular patch cord, T568A/B, clear boot 1m, 250 MHz rated stranded cordage, a patented cross pair isolator, and an innovative 3600 crimp, which provides excellent plug-to-cable strain relief without causing pair deformation, excellent bend relief, boot, and integrated strain relief ensure proper bend relief, critical for Category 6 performance. Electrical Performance Specification, contract resistance 20m Ohm, input to output DC resistance 200m Ohm, min. dielectric withstands voltage (contact to contact) 1000V DC or AC peak, insulation resistance 500m Ohm, compatibility backward to CAT 5e and 6, current rating @25 OC 1.5A, power over ethernet suitable for PoE and PoE (24 units)

Pole line hardware and Roughing-ins, Pole Clamps, Messenger Clamps, PVC pipes, Pullbox, Cable ladder, Clamps, hangers, fittings, and consumables materials and tools (1 lot)

■ Installation of Aerial mounted Fiber Optic cable with 35 terminations (23 termination for Bayombong and 11 Bambang) + 1 optional termination Length of Fiber for each termination (meters) Bayombong Campus CVM Building (395)

CTE Building (125)

output connections 6 x IEC-C13 (4 units),

#### **ACCESSORIES**

1U Cable Management Horizontal Mount 19-inch Server Rack, 24 Slot Metal Finger Duct Wire Organizer with Cover, Black, with cage nut (40 units),

CAT 6 UTP @ 300m (8 units), MC 6 UTP modular cords, Category 6 MC, double-ended, 4 pair UTP stranded modular patch cord, T568A/B, clear boot 1m, 250 MHz rated stranded cordage, a patented cross pair isolator, and an innovative 3600 crimp, which provides excellent plug-to-cable strain relief without causing pair deformation, excellent bend relief, boot, and integrated strain relief ensure proper bend relief, critical for Category 6 performance. Electrical Performance Specification, contract resistance 20m Ohm, input to output DC resistance 200m Ohm, min. dielectric withstands voltage (contact to contact) 1000V DC or AC peak, insulation resistance 500m Ohm, compatibility backward to CAT 5e and 6, current rating @25 OC 1.5A, power over ethernet suitable for PoE and PoE (24 units)

Pole line hardware and Roughing-ins, Pole Clamps, Messenger Clamps, PVC pipes, Pullbox, Cable ladder, Clamps, hangers, fittings, and consumables materials and tools (1 lot)

■ Installation of Aerial mounted Fiber Optic cable with 35 terminations (23 termination for Bayombong and 11 Bambang) + 1 optional termination Length of Fiber for each termination (meters) Bayombong Campus CVM Building (395)

CTE Building (125)

CERMSD Building (290)

CBE Building (295)

CSIT Building (135)

CHE Building (335)

CAS Building (265)

CA Building (155)

COE Building (150)

Administration Building (New) (155)

Administration Building (Old) (255)

Registrar Building (270)

Library Building (235)

Gymnasium (455)

International House (420)

Analytic Building (470)

Nutrition Building (475)

Research Building (330)

Clinic Building (355)

Phil Citrus Research Building (645)

DFTC Building (840)

Farm Mechanic (150)

Men Dormitory (400)

**Bambang Campus** 

Administration Building (204)

Engineering Science Lab Building (270)

Engineering Building (220)

CIT Building (70)

CTE Building (240)

CBA Building (205)

Main Building Ground Floor (280)

IP Ladies Dormitory (350)

Gymnasium (250)

TVEP Twin Building (205)

Stadium (480)

Total Length: 10,595 meters (estimated)

- Labor Cost (20% of total cost)
- Network Cabinet 6U with power distribution unit, 28port Gigabit L2
- Layer 3 24-Port 10/100/1000T 802.3at
   PoE + 4Port 10G SFP+Stackable
   Managed Switch, 370W, 1U, etc.
- Managed Dual band Access points (WIFI 6 compatible)
- 2200VA/1200 Watts 230V Line Interactive with AVR UPS, etc.

CERMSD Building (290)

CBE Building (295)

CSIT Building (135)

CHE Building (335)

CAS Building (265)

CA Building (155)

COE Building (150)

Administration Building (New) (155)

Administration Building (Old) (255)

Registrar Building (270)

Library Building (235)

Gymnasium (455)

International House (420)

Analytic Building (470)

Nutrition Building (475)

Research Building (330)

Clinic Building (355)

Phil Citrus Research Building (645)

DFTC Building (840)

Farm Mechanic (150)

Men Dormitory (400)

Guest House (455)

**Bambang Campus** 

Administration Building (204)

Engineering Science Lab Building (270)

Engineering Building (220)

CIT Building (70)

CTE Building (240)

CBA Building (205)

Main Building Ground Floor (280)

IP Ladies Dormitory (350)

Gymnasium (250)

TVEP Twin Building (205)

Stadium (480)

Total Length: 11,050 meters (estimated)

- Labor Cost (20% of total cost)
- Network Cabinet 6U with power distribution unit, 28port Gigabit L2
- Layer 3 24-Port 10/100/1000T 802.3at
   PoE + 4Port 10G SFP+Stackable
   Managed Switch, 370W, 1U, etc.
- Managed Dual band Access points (WIFI 6 compatible)
- 2200VA/1200 Watts 230V Line Interactive with AVR UPS, etc.

- 12Port ODF (For 12core Duplex LC, adaptor unloaded, 1U)
- Layer 3 24-Port 10G SFP+ + 4-Port 100G QSFP28 Managed Switch with Dual 100-240V AC Redundant Power, IU, etc.
- 48 Port ODF (For 48core SC/FC, 96 core Duplex

LC, adaptor unloaded, 3U)

- Overhead Fiber Raceways
- Fiber Patch Cable (1meter)
- PS On-Line SRV 2000VA/1600W 230V UPS, etc.
- 1U Cable Management Horizontal Mount 19imch Server Rack, 12/24 Slot Metal Finger Duct Wire Organizer with cover
- Cat 6 Cable UTP Unshielded AWG24
   Gray Data LAN Cable Cat6 305 meters
   1000 ft
- Gigabit Cat6 UTP Cable Patch cord Patch cable with RJ45 CAT6 3M High Quality-Yellow Patch Cord Cat6
- 1u fan unit rackmount type for data cabinet 19inch
- Vertical Metered Power Distribution Unit, 220V 15A, 10-way
- Poleline Hardwares, PVC pipes, pullbox, cable ladder, clamps, hangers, fittings and consumable materials and tools

- 12Port ODF (For 12core Duplex LC, adaptor unloaded, 1U)
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   1000 ft
- Gigabit Cat6 UTP Cable Patch cord Patch cable with RJ45 CAT6 3M High Quality-Yellow Patch Cord Cat6
- 1u fan unit rackmount type for data cabinet 19inch
- Vertical Metered Power Distribution Unit, 220V 15A, 10-way
- Poleline Hardwares, PVC pipes, pullbox, cable ladder, clamps, hangers, fittings and consumable materials and tools

### **Additional Requirements**

Fiber Optic Fusion Machine
Optical Fiber Type SM(G.652/G.657),
MM(G.651), DS(G.653), NZDS(G.655), ED,
BIF/UBIF Cladding 90-150um, diameter
Coating 200-1000um Ave. splice loss
0.002dB(SM), 0.001dB(MM),
0.004dB(DS), 0.004dB(NZDS) Return Loss
Better than 60dB Splice duration 9sec
(typical mode), 7sec (fast mode) Display
4.3" colorized LCD X/Y:180 times, X or Y:
350 times 8. Power Supply 11.1N Lithium
battery, 13.5V/5A power adaptor
Corrosion Resistance Equipment
components, Parts, and materials meet
composite anti-corrosion requirements,

Anti-Fluid pollution. Heating Time 14sec Automatic Heating Automatic fiber identification & Heating when Close Cover. Automatic Fast splicing 14s Vgroove Fast Heating High-Quality Low Loss Typical Splicing Loss SM(≤0.002dB), MM(≤0.001dB) 4 motors, Super Precision 0.1um Water, Dust, Wind Resistance, High Altitude Titanium Alloy Body 5 Directionals Anti-shock PC Software Upgrade Data management. Configuration List Carrying Bag, Miller Pincers & Stripper, Dust-Blowing Ball with brush, Fiber cleaver, AC Power Line Power Adapter, Cooling tray, Plastic tweezers, and Backup Electrode Bar Hand Tools Diagonal Cutter Plier Lineman Plier Long Nose Plier Kevlar Scissor

The bidder must conduct a 1-day training for the basic troubleshooting, splicing, and fusing of fiber.

The bidder must submit a High-level Network Design and Single Line Design Diagram for fiber optic backbone network interconnectivity based on the actual site survey.

The bidder must provide brochures for all the products and equipment offer as the basis of checking the required technical specifications of the products and equipment.

The bidder must provide original certification as an authorized installer and reseller partner from an authorized distributor for all the products and equipment as the basis for the 3-year warranty certificate of the equipment (Network Switches, and Fiber Optic Fusion Machine), 25-year product warranty for Fiber Optic Cables and components such as data cabinets, ODF,

		fiber optic panel fiber splice closures, fiber patch cords, pigtails, and adaptors,	
		1-year warranty for Wi-Fi Access Point and 5-year CAT6 system, 2 years	
		warranty for UPS and 1-year warranty for UPS battery.	
		The bidder must submit a 5-year aftersales and free on-site technical support warranty certification.	
		Must simultaneously done for both campuses	
For guid	ance and information of all concerned.		
		Cum	
		CRISTINA R. SALVOSA, DPA  UBAC Chairperson-Goods &	
Received by the Bidder:			