

Datasheet

IP-50FX200

August 2023 | Rev. B

Disaggregated Wireless Backhaul Router

The IP-50FX200 is a Disaggregation Cell Site Gateway (DCSG) that combines three vital cell site functions into one product: a cell site router (CSR), a networking switch, and a radio indoor unit (IDU). IP-50FX can be connected via fiber and Ethernet to any type of device and supports radio configurations of up to 16+0. Its high switching capacity and port density make it an excellent fit for any cell site or aggregation site that requires ultra-high capacity, multi-directional functionality, and switching/routing capabilities.

IP 50FX200 utilizes radio-aware networking capabilities, such as Layer 1 Link Bonding and Ethernet Bandwidth Notification (ETH-BN), as well as Class C-compliant synchronization that supports SyncE and IEEE-1588 Transparent Clock and Boundary Clock. These and many more advanced capabilities enable IP-50FX200 to serve as a revolutionary solution for any multi-carrier requirement, such as high-capacity trunks and multi-directional nodes.

Technical Specifications

Mechanical Specifications

Height: 44 mm

Width: 431.5 mm

Depth: 250 mm

Weight: 4 kg

Environmental Specifications

Operation: ETSI EN 300 019-1-3, Class 3.2

0°C (32°F) to +55°C (131°F)

Humidity: 5%RH to 95%RH

Storage: ETSI EN 300 019-1-1 class 1.2 (Weather protected, not temperature-controlled Storage)

Transportation: ETSI EN 300 019-1-2 class 2.3 power (Public transportation)

EMC: Canada/USA Radiated and conducted emissions tests according to ICES-003 and FCC 47 CFR part 15, subpart B
Europe according to EN 301 489-1/4 + EN 300 386
India according to TEC/SD/DD/EMC-221/05/OCT-16 + IEC 61000-4-29

Safety: Europe/CB/USA/Canada tests and certification according to EN/IEC/UL/CSA C22.2 NO 62368-1

Power Specifications

IDU Standard Input: -48 VDC with dual power supply feed for power redundancy.

Maximum power consumption with 2xPoE: ~264W

IDU DC Input range: -40.5 to -60 VDC

Applications

Broadband Access

Mobile and Metro Ethernet

Networking

Networking capacity: 64 Gbps

Layer 1 Link Bonding – up to 16 members.

Layer 2 Features:

- IEEE STP/MSTP/RSTP
- BPDU Protect
- Root Guard
- Routed VLAN interface
- Private VLAN Support
- IEEE QinQ Support
- IEEE 802.3ad-LAG
- IEEE 802.1ab-LLDP
- 4K VLAN Support
- Authentication 802.1x
- Multi-chassis LAG
- Authentication 802.1x
- VXLAN with VPN with Multihoming support.

Multicast Features:

- IGMP v1, v2, v3
- IGMP Snooping v1, V2, V3
- IGMP Report Suppression
- IGMP Snooping Querier
- IGMP Filter
- IGMP Snooping Proxy
- PIM-SM/SSM/DM
- MSDP

MPLS Features:

- LDP
- RSVP
- RSVP-TE for LSP Tunnels
- VPLS using LDP Signaling
- VPLS using BGP Signaling
- VRF Lite
- OAM for MPLS Networks

Layer 3 Features:

- Static Routing
- IPv6 Support
- BFD single hop & multi hop support
- BFD over v4: BGP, ISIS, OSPF & Static Route
- ISIS
- OSPF
- MP-BGP
- VRRP support
- LFA

QoS features:

- L2 and L3 Modular and Hierarchical QoS
- Rate Limiting – three rate coloring, policing, marking
- Shaping per queue, per port
- 802.1p remarking
- Egress QoS (Remarking/Policing)

Management Features:

- CLI based both in and out of band support
- SNMP v1, v2, v3 support
- RADIUS and TACACS+ support
- Netconf support

Network Security features:

- Authentication
- Authorization and Accounting (AAA) and TACACS+
- Secure Shell (SSH) Protocol Version 2
- SNMPv3 support
- Port security
- IEEE 802.1x authentication
- RADIUS support
- Policies based on basic and extended ACLs

Synchronization

1588 Boundary and Transparent Clock for full timing support from the network – G.8275.1 profile

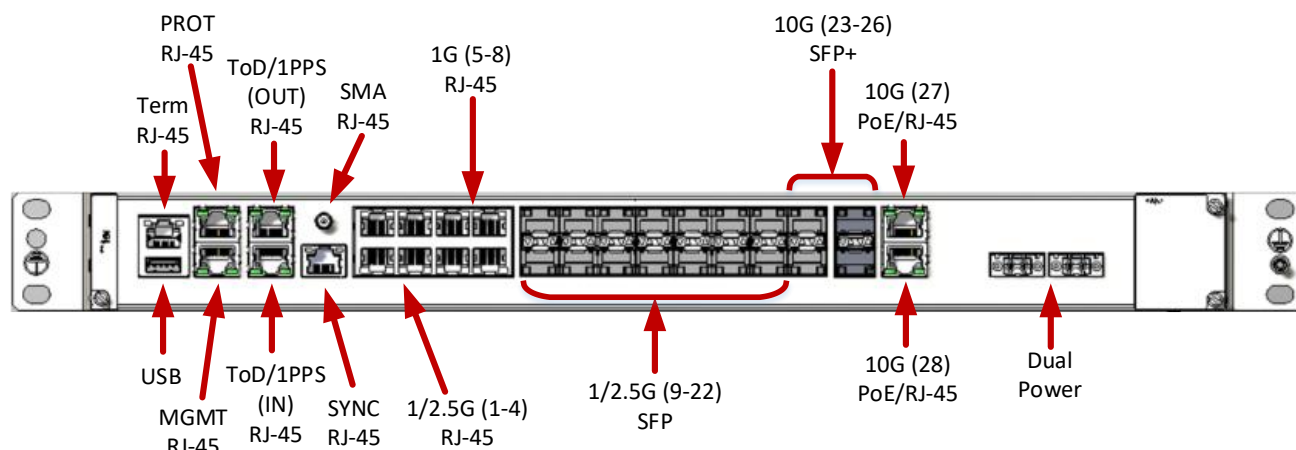
1588 Boundary and Transparent Clock for partial timing support from the network with GNSS as a main timing source – G.8275.2 profile

Supports 5G synchronization requirements

Product Image



IP-50FX200 Interfaces



- Terminal Port (TERM) – RJ-45 Terminal console interface (RS-232) for connection to a local craft terminal, for local CLI management of the unit.
- USB Port – Used for mounting an external storage, e.g., for NOS installation and upgrade.
- Protection Port (PROT) – RJ-45 Ethernet management interface supporting 10/100/1000Base-T, used for unit protection.
- Management Port (MGMT) – RJ-45 Ethernet management interface supporting 10/100/1000Base-T.
- ToD/1PPS (In/Out) – RJ-45 interface supporting 1PPS and ToD (in/out).
- 2/10MHz (SMA) – SMA (SubMiniature version A) connector to receive a 10 MHz signal from an external sync source.
- Sync – RJ-45 synchronization interface for T3 clock input.
- 1/2.5 GbE Interfaces (RJ-45) – 4 ports (also supporting 100M)
- 1 GbE Interfaces (RJ-45) – 4 ports (also supporting 100M)
- 1/2.5G Optical Interfaces (SFP) – 14 ports
- 10G Optical Interfaces (SFP+) – 4 ports
- 10 GbE Interfaces (RJ-45) – 2 ports with PoE

Approved SFP Modules

Marketing Model	Marketing Description	Item Description
SFP-GE-ZX	SFP optical interface 1000Base-ZX	XCVR,SFP,1550nm,2.125G,SM,80km,W.DDM
SFP-GE-SX	SFP optical interface 1000Base-SX	XCVR,SFP,850nm,MM,1.0625 Gbit/s FC/ 1.25 GBE,PACKED
SFP-GE-LX	SFP optical interface 1000Base-LX*ROHS	XCVR,SFP,1310nm,1.25Gb,SM,10km,W.DDM, SINGLE PACK KIT
SFP-GE-ELC	SFP electrical interface 1000Base-T	SFP 1000BASE-T 3.3V STAND ALONE RoHS
SFP-3.7G-SX-EXT-TEMP	SFP-3.7G-SX-EXT-TEMP	XCVR,SFP,850nm,MM,3.7 Gbit/s, INDUSTRIAL GRADE
SFP-3.7G-LX-EXT-TEMP	SFP-3.7G-LX-EXT-TEMP	XCVR,SFP,1310nm,SM,10km,3.7 Gbit/s, INDUSTRIAL GRADE
SFP+10GBASE-SR	SFP+ 10GE optical interface 10GBASE-SR	XCVR,SFP+,850nm,MM,10 Gbit/s, COMMERCIAL GRADE
SFP+10GBASE-LR	SFP+10GBASE-LR	XCVR,SFP+,1310nm,SM,10 Gbit/s,2km,COMMERCIAL GRADE
SFP+10GBASE-SR10-EXT-TEMP	SFP+10GBASE-SR10-EXT-TEMP	XCVR,SFP+,850nm,MM,Up to 10 Gbit/s, INDUSTRIAL GRADE
SFP+10GBase-LR_SM_IND	SFP+ 10G-ZR,1550nm,80km,Duplex LC,IND	XCVR,SFP+,1550nm, Up to 10Gb,SM,80km, Duplex LC, W.DDM,INDUSTRIAL GRADE,SINGLE PACK KIT