

FSP 150CC-825

THE ETHERNET ACCESS PLATFORM



The ADVA FSP 150 family of Carrier Ethernet access products provides devices for Ethernet service demarcation, extension and aggregation to support delivery of intelligent Ethernet services both in-region and out-of-region. It allows service providers to ubiquitously deliver differentiated Ethernet services to customers in business and wholesale applications.

The FSP 150CC-825 provides Ethernet service extension over fiber for service providers looking to deploy intelligent differentiated Ethernet services. The device can work in book-end applications, with ADVA Optical Networking aggregation devices and with industry-standard data switches and routers. With five Ethernet service ports and advanced service definition capabilities, the FSP 150CC-825 is capable of supporting multiple customers and multiple services over a shared Fast Ethernet or Gigabit Ethernet optical connection. Optional network interface protection and redundant power supplies ensure highest service availability.

ADVA Optical Networking's patent-pending Etherjack® demarcation technology allows a carrier to provide an intelligent Ethernet service demarcation point compliant with the latest Operations, Administration and Maintenance (OAM) standards such as IEEE 802.3ah, IEEE 802.1ag, ITU-T Y.1731 and RFC 2544. Combined with an MEF-certified User Network Interface (UNI), the FSP 150CC-825 enables carriers to deliver Ethernet services that can be remotely monitored and managed with a minimal number of truck rolls. It provides the service intelligence necessary to encourage enterprise data users to make the switch from Frame Relay, Private Line and ATM services to a carrier-class Ethernet service.

Individual customers and services are separated utilizing the sophisticated UNI function that includes support for Ethernet Virtual Circuits (EVC) as well as hierarchical Quality of Service (QoS) management. Verification of Service Level Agreements (SLAs) can be performed on a per-service basis to ensure high service availability for mission-critical applications.

As Carrier Ethernet networks scale, low-touch provisioning capabilities become essential to ensure cost-efficient service rollout and significantly reduce the need for truck rolls. With the extensive set of standards-based auto-configuration functions and remote OAM capabilities, unskilled craft personnel can install and turn-up services without onsite provisioning.

ADVA Optical Networking designs and delivers all products with a commitment to optimize the total cost of ownership and return on investment. Leveraging the latest technologies for accelerating planning, simplifying installation and provisioning, streamlining network operations and increasing energy efficiency enables cost-effective and profitable Optical+Ethernet networking.

The FSP product family provides comprehensive Optical+Ethernet networking solutions for access, metro core and regional networks. ADVA Optical Networking is focused on the needs of enterprise and service provider customers deploying data, storage, voice and video applications.

FEATURES + BENEFITS

- Is ideal for E-Line, E-LAN and E-tree services such as Internet access, Private Line, VoIP, video and mobile backhaul; enables MEF-certifiable services
- Comprehensive, MEF-certified User Network Interface (UNI) for advanced service definition and service intelligence elementary for integrated service delivery
- Standards-compliant Etherjack® demarcation technology provides support for stringent Service Level Agreements (SLAs) and integrates with a wide range of network management tools for back-office SLA support
- IEEE 802.3ah, IEEE 802.1ag, ITU-T Y.1731 and RFC 2544 OAM tools provide seamless end-to-end performance management across third-party edge and core networks
- Option for network interface protection and redundant power supplies matches requirements for highest service availability (99.999%)
- Low-touch provisioning capability via in-band management ensures that unskilled craft personnel can install and turn-up services without onsite provisioning

 **ADVA**TM
Optical Networking

SPECIFICATIONS



ACCESS CAPACITY

- 5 access ports with 4 electrical 10/100BaseT ports and one shared electrical 10/100/1000BaseT or optical 100/1000BaseX port

NETWORK INTERFACE

- Two 100/1000BaseT or 100/1000BaseX ports for 1:1 LACP protection

VLAN SUPPORT

- 4096 VLANs (IEEE 802.1Q customer-tagged) and stacked VLANs (Q-in-Q service provider tagged)
- 2-tag management (push/pop/swap) for c-tag and s-tag
- Flexible network encapsulation with Ethertype swap
- IEEE 802.1ad Provider Backbone (c-tag, s-tag)

TRAFFIC MANAGEMENT

- Classification (802.1p, 802.1Q, IP-TOS/DSCP)
- Policing (CIR/CBS/EIR/EBS) with dual rate, 3-color marking and 64kbit/s resolution
- Hierarchical queuing/shaping
- Up to 8 classes of service with strict priorities and WRR scheduling across EVCs

ETHERNET OAM

- IEEE 802.3ah EFM-OAM
- IEEE 802.1ag Connectivity Fault Management
- ITU-T Y.1731 fault management and diagnostic features
- Multi-vendor SLA monitoring with UDP/ICMP echo and ICMP timestamp (ESA)
- Terminal and facility loopbacks on port- and EVC-level for all interfaces
- Cable diagnostics with benchmarks (electrical interfaces only)
- Embedded RFC 2544 test generator and analyzer (ECPA)
- MEF-compliant Layer 2 Control Protocol Disposition (e.g., IEEE 802.3ah, IEEE 802.3x), extensive filter options for Layer 2 packet types
- Link Loss Forwarding to signal local link and network path failures
- Dying gasp message for power failure visibility

PERFORMANCE MONITORING

- RFC 2819 RMON Etherstats on a per-port and per-service basis
- Current PM bins for 15-minute and 1-day monitoring
- 1-day history bin and up to 32 PM history bins for 15-minute intervals
- Threshold crossing alerts (TCA) supported on 1-day and 15-minute PM bins
- Physical parameter monitoring for SFP optics, including TCAs
- Temperature monitoring and thermal alarms

LOW-TOUCH PROVISIONING

- DHCP/BOOTP auto-configuration
- 802.1x port authentication
- Text-based configuration files
- TFTP for configuration file copy

MANAGEMENT & SECURITY

Local management

- Serial connector (RJ45) using CLI
- Local LAN port (RJ45) using CLI, SNMP and Web GUI interfaces

Remote management

- Maintains in-band VLAN and MAC-based management tunnels
- Full interoperability with FSP 150CM and FSP 150CC products

Management protocols

- Telnet, SSH (v1/v2), HTTP/HTTPS, SNMP (v1/v2c/v3)

Secure administration

- Database backup and restore
- Software downloads via FTP, HTTPS, SFTP or SCP
- Remote authentication via RADIUS/TACACS
- SNMPv3 with authentication and encryption
- Access Control List (ACL)

IP routing

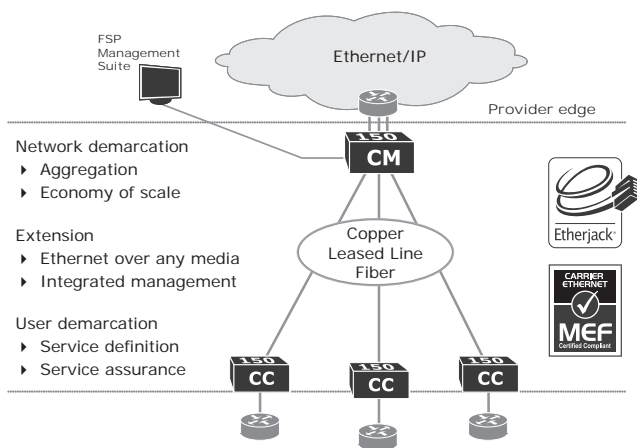
- DHCP, RIPv2 and static routes, ARP cache access control

REGULATORY & STANDARDS COMPLIANCE

- IEEE 802.1Q (VLAN), 802.1p (Prio), 802.1ag (CFM), 802.3ah (EFM), 802.1x
- ITU-T Y.1731, G.8010/Y.1306, G.8011.1+2, G8012, G.8012
- MEF-6, MEF-9, MEF-10.1, MEF-11, MEF-14, MEF-15
- IETF RFC 2544 (Frame-Tests), RFC 2863 (IF-MIB), RFC 2865 (RADIUS), RFC 2819 (RMON)
- ANSI C84.1-1989
- ETSI 300-132-2, BTNR2511, ETS 300-019, ETS 300-019-2-[1,2,3], ETSI 300-753
- NEBS Level 3 certified
- Telcordia GR-499, GR-63-CORE, SR-332
- Safety IEC/UL/EN 60950, 21CFR1040.10, EN 60825, EN 50371, EN 300-386, EN 50160, IEC-60320/C14
- EMI EN 300-386, GR-1089-CORE, ETS 300-132, 47CFR part 15, FCC part 15, Class A, Industry Canada

ENVIRONMENTAL

- Dimensions: 1U compact chassis, 439mm x 43mm x 269mm/ 17.3" x 1.7" x 10.6" (W x H x D), ETSI-compliant
- Operating temperature: 0 to +50°C
- Storage temperature: -40 to +70°C (GR-63-CORE)
- Humidity: 5 to 95%, B1 (non-condensing)
- Modular AC-PSU: 90-264VAC (47-63Hz) with over-voltage and over-current protection
- Modular DC-PSU: 36-72VDC with over-voltage and over-current protection
- Maximum power consumption: 25 Watts



For more information please contact an ADVA Optical Networking consultant or visit us at www.advaoptical.com