

Ethernet Smart Switch

ESSential F-1000

ESSential F-1000 is one in a family of smart Ethernet switches developed with the performance, flexibility, manageability and unparalleled features required to address the Enterprise LAN and WAN applications expected in tomorrows networks.

The **ESSential F-1000** offers 16 Gigabit Ethernet ports. The Gig-E ports are configurable via four (4), four (4) port Gig-E modules. The Gig-E module is available in standard 1000 Base-T, as well as SX (multi-mode) and LX (single mode) plug-in modules. In addition Both L2 and L3 functions are supported.

The **ESSential F-1000** is available with optional Content Addressable Memory (CAM) and 64KB Rambus Memory (RDRAM). Additional plug-in modules are also available providing value-added VPN and firewall functions.

Features

- 4x4Gbp Ethernet ports
- Layer 2 features including:
 - Learning, forwarding and aging, MAC filtering
 - STP, fast STP and multiple STP
 - Port based network access control (802.1x)
 - Port based and protocol based VLAN, VLAN tagging and GVRP
 - Priority Queuing
 - Flow Control
 - Link Aggregation
 - Uni-directional and Bi-directional Port mirroring
 - Broadcast storm recovery
 - Head of Line Blocking Prevention



- Layer 3 features including
 - IPv4 Routing
 - ARP, ARP Proxy, and RARP
 - Multi-port Subnet-VLAN Routing
 - Static IP Routes
 - Multi-subnet Broadcast
 - CIDR
 - RIP, RIP1, RIP2, Subnet filtering, MD5, Static Internal Routes, and Static External Routes
 - OSPFv2, OSPFv2 MIB, MD5, Opaque LSA
 - BGP (BGP4, AS, Route Reflection, Communities, Confederation, Route Flap Damping, Multi-protocol Extensions)
 - IP Multicast (IGMPv2, PIM-DM, PIM-SM, DVMRP)
 - VRRP
 - Router Discovery
 - BOOTP/DHCP Relay
- Layer 3+ and Additional Features
 - TCP and UDP
 - Bandwidth Allocation
 - Packet Filtering and Access Control List (ACL)
 - Network Address Translation (NAT)
 - Protection against Denial of Services (DOS)
- OAMP Features
 - BOOTP, DHCP, TFTP, XMODEM
 - User Interface (CLI, Telnet, WBI)
 - SNMP
 - RADIUS

ESSential F-1000 Specifications

<p>Ports</p> <ul style="list-style-type: none"> • Four () 4 port Gig-E modules totaling up to 16 Gig-E ports • 4 port Auto MDIX 10/100/1000 Base-TX module • 4 port 1000Base-SX, 1000 Base-LX modules <p>• Capacity</p> <ul style="list-style-type: none"> • 32 Gbps switch fabric • up to 115K MAC addresses • up to 256MB packet buffer <p>IEEE Standards</p> <ul style="list-style-type: none"> • IEEE 802.1D Bridging, Spanning Tree, GARP, GMRP • IEEE 802.1Q VLAN Tagging • IEEE 802.3ac Frame Extension for VLAN Tagging • IEEE 802.1p – Priority Queuing • IEEE 802.3x Flow Control • IEEE 802.3ad Link Aggregation • IEEE 802.1s Multiple Spanning Trees • IEEE 802.1w Rapid Spanning Tree • IEEE802.1x Port based network access control <p>IETF RFC</p> <ul style="list-style-type: none"> • RFC 768,783,791,792,793, 826, 854, 855, 894, 896, 922, 951, 1058, 1075, 1155, 1157, 1212, 1256, 1518, 1519, 1745, 1771, 1812, 1867, 1901, 1905, 1906, 1907, 1908, 1945, 1965, 1994, 1997, 2068, 2069, 2104, 2131, 2138, 2139, 2284, 2295, 2236, 2328, 2338, 2362, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2453, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2578, 2579, 2580, 2661, 2796, 2865, 2869 <p>IETF RFC MIBs</p> <ul style="list-style-type: none"> • RFC 1213 – MIB II • RFC 1493 – Definitions of Managed Objects for Bridges • RFC 1573 – Evolution of the Interfaces Group of MIB-II • RFC 1643 – Ethernet MIB • RFC 1724 – RIP Version 2 MIB Extensions • RFC 1850 – OSPF Version 2 Management Information Base • RFC 2233 – The Interfaces Group MIB using SMIv2 • RFC 2674 – Definitions of Managed Objects for Bridges with Traffic Classes, Multicast Filtering and Virtual LAN Extensions (partially supported) • RFC 2787 – VRRP MIB • RFC 1757 RMON MIB • CyberPath Private MIB 	<p>Management Features</p> <ul style="list-style-type: none"> • CLI, WEB and SNMPv1, SNMPv2 and SNMPv3 • Dedicated serial and 10/100Base-T management port • In-Band Management • RMON Groups 1,2,3 and 9 (Statistics, History, Alarm and Events) • On-line diagnostics • Backdoor Interface for troubleshooting • Firmware Upgrade using TFTP, X modem • Database backup and restoration • Local language support • User authentication using RADIUS protocol <p>LEDs</p> <ul style="list-style-type: none"> • System Power • Self test • Alarm • Link status • Activity <p>AC Input</p> <ul style="list-style-type: none"> • AC Input 100 to 240 50 to 60Hz <p>Power Supply</p> <ul style="list-style-type: none"> • Internal auto-ranging transformer • Support for external redundant power supply <p>Power Consumption</p> <ul style="list-style-type: none"> • 150W max. <p>Heat Dissipation</p> <ul style="list-style-type: none"> • 511 BTU/hr <p>Size</p> <ul style="list-style-type: none"> • 444mm X 355mm x 66mm • (17.47in x 13.97 in x 2.5 in) <p>Weight</p> <ul style="list-style-type: none"> • 5.9 kg • 13.1 lbs <p>Operational Environment</p> <ul style="list-style-type: none"> • Temperature 0 °C to 40 °C • Humidity 10% to 90% • Storage -40 °C to 70 °C <p>Compliance</p> <ul style="list-style-type: none"> • FCC Class A • CE mark • UL 	<p>Models</p> <ul style="list-style-type: none"> • ESS-F1000 Basic model • ESS-F1000 with 1 CAM • ESS-F1000 Platform with 3 CAMs and 64M B RDRAM <p>GigE Modules</p> <ul style="list-style-type: none"> • 4-port GigE Tx module RJ-45 connector • 4-port Gig-E SX Module MM, LC connector • 4-port Gig-E SX Module MM, MT-RJ connector • 4-port Gig-E LX Module SM, LC connector • 4-port Gig-E LX Module SM, MT-RJ connector • 4-port Gig-E LX Module MM, LC connector • 4-port Gig-E LX Module MM, MT-RJ connector • 4-port Gig-E SFP (planned) • 2-port GBIC (planned) <p>Ordering Information:</p> <p>E00-11100-00: ESS F1000 Platform</p> <p>E00-11100-10: ESS F1000 Platform with 1 CAM</p> <p>E00-11100-21: ESS F1000 Platform with 3 CAMs and 64MB RDRAM</p> <p>GigE Modules</p> <p>E10-50100-00: 4-port Gig-E TX Module</p> <p>E10-50200-01: 4-port Gig-E SX Module MM, LC connector</p> <p>E10-50200-02: 4-port Gig-E SX Module MM, MT-RJ connector</p> <p>E10-50231-01: 4-port Gig-E LX Module SM, LC connector</p> <p>E10-50231-02: 4-port Gig-E LX Module SM, MT-RJ connector</p> <p>E10-50230-01: 4-port Gig-E LX Module MM, LC connector</p> <p>E10-50230-02: 4-port Gig-E LX Module MM, MT-RJ connector</p> <p>E10-50250-20: 4-port Gig-E SFP (planned)</p> <p>E10-60300-30: 2-port GBIC (planned)</p>
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