








Actelis Product Reference Guide

Carrier Ethernet over Copper™

| | ML 1300 | ML 130 | ML 600 | ML 50 | XR 239 | ML 1500 | ML 150 |
|-----------------------------|--|--|--|---|--|---|--|
| |  |  |  |  |  |  |  |
| Application | <ul style="list-style-type: none"> Aggregation of symmetrical, high-speed Ethernet over bonded copper pairs Carrier Class, high availability applications | <ul style="list-style-type: none"> Aggregation of symmetrical, high-speed Ethernet over bonded copper pairs Particularly suited for low density and RT installations | <ul style="list-style-type: none"> Aggregation of symmetrical, high-speed Ethernet over bonded copper. Copper ADM | <ul style="list-style-type: none"> Aggregation of symmetrical, high-speed Ethernet over bonded copper. | <ul style="list-style-type: none"> Ethernet in the First Mile repeater, extends reach of high capacity Ethernet over 98% loop lengths | <ul style="list-style-type: none"> Fiber quality, long-reach DS3/Fractional DS3 connectivity to DSLAMs, RT cabinets, ATMs, Cellular base stations, etc. | <ul style="list-style-type: none"> Fiber quality DS3/Fractional DS3 connectivity to DSLAMs, RT cabinets, ATMs, Cellular Base Stations, etc. |
| Network/Service I/F | <ul style="list-style-type: none"> 10/100/1000Base-T, 100/1000Base-FX, DS3/E3 | <ul style="list-style-type: none"> 10/100/1000Base-T, 100/1000Base-FX, DS3/E3 | <ul style="list-style-type: none"> 10/100Base-T, 100/1000Base-FX, DS3/E3 | <ul style="list-style-type: none"> 10/100Base-T | <ul style="list-style-type: none"> N/A | <ul style="list-style-type: none"> DS3 DS1 | <ul style="list-style-type: none"> DS3 DS1 |
| Copper I/Fs | <ul style="list-style-type: none"> 2Base-TL (IEEE 802.3ah / ITU-T G.998.2 over Extended G.SHDSL) | <ul style="list-style-type: none"> 2Base-TL (IEEE 802.3ah / ITU-T G.998.2 over Extended G.SHDSL) | <ul style="list-style-type: none"> 2Base-TL (IEEE 802.3ah / ITU-T G.998.2 over Extended G.SHDSL) | <ul style="list-style-type: none"> 2Base-TL (IEEE 802.3ah / ITU-T G.998.2 over Extended G.SHDSL) | <ul style="list-style-type: none"> 2Base-TL (IEEE 802.3ah / ITU-T G.998.2 over Extended G.SHDSL) | <ul style="list-style-type: none"> ITU-T G.998.3 (over Extended G.SHDSL) | <ul style="list-style-type: none"> ITU-T G.998.3 (over Extended G.SHDSL) |
| Topology | <ul style="list-style-type: none"> Point-to-multipoint (CO side) Stack Ring | <ul style="list-style-type: none"> Point-to-multipoint (CO side) Point-to-point (CO/RT) Stack Ring | <ul style="list-style-type: none"> Point-to-multipoint (RT) Point-to-point (CO/RT) Linear add/drop | <ul style="list-style-type: none"> Point-to-multipoint (RT) Point-to-point (CO/RT) | <ul style="list-style-type: none"> 2 pairs per repeater Up to 4 repeaters line powered with one power feeding unit | <ul style="list-style-type: none"> Point-to-point (CO/RT) | <ul style="list-style-type: none"> Point-to-point (CO/RT) |
| Main Features | <ul style="list-style-type: none"> Up to 64 copper pairs Up to 365 Mbps per ML 1300 Multi line-card configuration for carrier class protection | <ul style="list-style-type: none"> Up to 16 copper pairs Up to 91 Mbps per ML130 | <ul style="list-style-type: none"> 2, 4 or 8 pairs models (ML620, ML630, ML680) Up to 45Mbps | <ul style="list-style-type: none"> 1, 2, 4 or 8 pairs models (ML51/52/54/58) Up to 45Mbps | <ul style="list-style-type: none"> 2 pairs per repeater Up to 5.7 Mbps per pair | <ul style="list-style-type: none"> Up to 32 pairs Up to 1xDS3+4xDS1 traffic Multi line-card configuration for carrier class protection | <ul style="list-style-type: none"> Up to 16 pairs Compact form-factor for RT installations Up to 1xDS3+4xDS1 traffic |
| Shared Features | <ul style="list-style-type: none"> Wirespeed switching 802.1Q VLAN and VLAN stacking 802.1p, 802.1d STP/RSTP L2 & L3 Classification Fully managed Outdoor hardened | | | | <ul style="list-style-type: none"> Fully managed Outdoor hardened | <ul style="list-style-type: none"> Forward Error Correction (FEC) for error-free transmission Fully managed Outdoor hardened Compact form-factor for RT installations | |
| Standards Compliance | <ul style="list-style-type: none"> MEF 9, 14 IEEE 802.3ah, ITU-T G.998.2 ITU-T G.991.2, ETSI TS 101 524 FCC, UL, CE, ITU-T NEBS 3 RUS listed | <ul style="list-style-type: none"> MEF 9, 14 IEEE 802.3ah, ITU-T G.998.2 ITU-T G.991.2, ETSI TS 101 524 FCC, UL, CE, ITU-T NEBS 3 RUS listed | <ul style="list-style-type: none"> MEF 9, 14 IEEE 802.3ah, ITU-T G.998.2 ITU-T G.991.2, ETSI TS 101 524 FCC, UL, CE, ITU-T NEBS 3 | <ul style="list-style-type: none"> MEF 9 IEEE 802.3ah, ITU-T G.998.2 ITU-T G.991.2, ETSI TS 101 524 FCC, UL, CE NEBS 3 OSMINE RUS listed | <ul style="list-style-type: none"> IEEE 802.3ah, ITU-T G.998.2 ITU-T G.991.2, ETSI TS 101 524 FCC, UL, CE NEBS 3 RUS listed | <ul style="list-style-type: none"> ITU-T G.998.3 ITU-T G.991.2, ETSI TS 101 524 FCC, UL, CE NEBS 3 OSMINE RUS listed | <ul style="list-style-type: none"> ITU-T G.998.3 ITU-T G.991.2, ETSI TS 101 524 FCC, UL, CE NEBS 3 OSMINE RUS listed |
| Spectral Compliance | <ul style="list-style-type: none"> ITU-T G.991.2 (Annex A, B, F, G) ETSI TS 101 524 (Annex E) ANSI T1.417, T1.426 NICC ND1602 (UK ANFP) | | <ul style="list-style-type: none"> BIPT BRUO 2005 (Belgian SM) Netherlands SM Japan SM | | <ul style="list-style-type: none"> ITU-T G.991.2 (Annex A,B,F,G) ANSI T1.417, T1.426 | | |