Performance Parameters

They are defined as a string to accommodate proprietary extension.

Valid values are:

Name	Description	Source Standard	Layer rate
"PMP_AE"	dot3StatsAlignmentErrors or etherStatsCRCAlignErrors Rx	RFC 2665 or RFC 2819	
"PMP_AISS"	Alarm Indication Signal (AIS) Seconds (counter)	ANSI T1.231	
"PMP_ATM_TC_CELLS"	Count of cells received or transmitted on this ATM NI	RFC 2515, AF-NM-0020.001, I.751	LR_ATM_NI
"PMP_B1_CVS"	B1 Coding Violation Seconds (counter) aka ES		
"PMP_BBE"	Background Block Errors (counter)	G.826	
"PMP_BBER"	BBE Ratio (counter)	G.826	
"PMP_BER"	Bit Error Rate, meter parameter = a measure of the signal quality measured at the facility port input, expressed as a bit error rate (measurement/estimation methods are NE-specific)	ANSI T1.231	
"PMP_BER_AVG"	Average Bit Error Rate during the interval		
"PMP_BER_MAX"	Maximum Bit Error Rate during the interval		
"PMP_BER_MIN"	Minimum Bit Error Rate during the interval		
"PMP_BES"	Bursty Errored Seconds(counter)		
"PMP_BROADCASTPKTS"	etherStatsBroadcastPkts Rx	RFC 2819	
"PMP_CELL[<qualifier>]"	Count of received or transmitted cells	RFC 2512	LR_ATM_NI LR_ATM_VP LR_ATM_VC
"PMP_CELL_LOST[<qualifier>]"	Count of received or transmitted lost cells	AF-NM-0020.001	LR_ATM_VP LR_ATM_VC
"PMP_CELL_MISINS[<qualifier>]"	Count of received or transmitted misinserted cells	AF-NM-0020.001	LR_ATM_VP LR_ATM_VC

Name	Description	Source Standard	Layer rate
"PMP_CRC"	Cyclical Redundancy Check (counter) kind of error detection code (edc)		
"PMP_CRE"	dot3StatsCarrierSenseErrors Tx	RFC 2665	
"PMP_CV"	Code Violations (counter)	GR 253	
"PMP_DISC_CONG[<qualifier>]"	Count of cells discarded due to congestion	AF-NM-0020.001, I.732	LR_ATM_NI
"PMP_DISC_HEC_VIOL[<qualifier>]"	Count of discarded cells due to HEC violation	RFC-2515, AF-NM-0020.001, I.751, GR-1248	LR_ATM_NI
"PMP_DISC_PROT_ERR"	Count of discarded cells due to protocol errors	AF-NM-0020.001, I.751, GR-1248	LR_ATM_NI
"PMP_DS3_PLCP_SEFS"	Count of DS3 PLCP Severely Errored Framing Seconds	RFC 2515	LR_ATM_NI
"PMP_DS3_PLCP_UAS"	Count of DS3 PLCP Unavailable Seconds	RFC 2515	LR_ATM_NI
"PMP_COLLISIONS"	etherStatsCollisions Rx	RFC 2819	
"PMP_MULTICASTPKTS"	etherStatsMulticastPkts Rx	RFC 2819	
"PMP_DISCARDS"	ifInDiscards Rx ifOutDiscards Tx	RFC 2863 RFC 2863	
"PMP_DTX"	dot3StatsDeferredTransmissions Tx	RFC 2665	
"PMP_DVB_DISC"	Discarded packets after receiving (Transmitter Discarded Packets)		LR_DVB
"PMP_DVB_GFPCRC"	Superblocks not corrected by CRC		LR_DVB
"PMP_DVB_GFPSUP"	Transmitting/Receiving Superblocks		LR_DVB
"PMP_DVB_LOS"	LOS detected and LCS detected		LR_DVB
"PMP_DVB_PKTS"	Receiving/Transmitting MPEG2 packets		LR_DVB
"PMP_DVB_WDERR"	Word Error of 8B10B coding and disparity error (Transmitter 10BERR words)		LR_DVB
"PMP_EB"	Errored Blocks (counter)	G.806, G.826	
"PMP_EC"	dot3StatsExcessiveCollisions Tx	RFC 2665	

Name	Description	Source Standard	Layer rate
"PMP_ERRORS"	ifInErrors Rx ifOutErrors Tx	RFC 2863 RFC 2863	
"PMP_ES"	Errored Seconds (counter)	G.826	
"PMP_ES_TA"	Errored Seconds Type A (counter)	ANSI T1.231	
"PMP_ES_TB"	Errored Seconds Type B (counter)	ANSI T1.231	
"PMP_ESR"	ES Ratio	G.826	
"PMP_FC"	Failure Count (counter)	ANSI T1.231	
	Count of near-end or far-end receive or transmit failure alarm conditions	af-phy-0086.001: “imaLinkNeTxNumFailures”, “Tx-FC”, “imaLinkNeRxNumFailures”, “Rx-FC”, “imaLinkFeTxNumFailures”, “Tx-FC-FE”, “imaLinkFeRxNumFailures”, “Rx-FC-FE”	LR_Fragment of IMA link CTP
"PMP_FCSE"	dot3StatsFCSErrors Rx	RFC 2665	
"PMP_FEC_EC"	Forward Error Correction Error Count (counter)		
"PMP_FEC_SCS"	count of forward error corrections seconds		LR_DSL
"PMP_FEC_UBC"	Forward Error Correction Uncorrectable Block Count (counter)		
"PMP_FFRA"	count of failed fast retrain attempts		LR_DSL
"PMP_FRA"	count of fast retrain attempts Note: G.992.2 (ADSL.lite) defines a fast retrain procedure to adapt transmission characteristics to changing line conditions caused by e.g. phone on/off hook transitions. It can be started by either TU-R and TU-C/O and is based on the concept of stored profiles at the TU-C/O.		LR_DSL
"PMP_FRAMES"	Total in frames or EtherStatsPkts Rx Total number of outbound frames Tx	RFC 2819	
"PMP_FREQUENCY"	meter parameter = It specifies the measured optical channel frequency of tunable lasers		

Name	Description	Source Standard	Layer rate
"PMP_FREQUENCY_AVG"	Average optical channel frequency during the interval		
"PMP_FREQUENCY_MAX"	Maximum optical channel frequency during the interval		
"PMP_FREQUENCY_MIN"	Minimum optical channel frequency during the interval		
"PMP_FSRC"	failed switch request counter	ETSI EN 301 129 and ITU-R F.750-4	
"PMP_FSRD"	failed switch request duration	ETSI EN 301 129 and ITU-R F.750-4	
"PMP_FTLE"	dot3StatsFrameTooLongs Rx	RFC 2665	
"PMP_INTMACERR"	dot3StatsInternalMacReceiveErrors Rx dot3StatsInternalMacTransmitErrors Tx	RFC 2665 RFC 2665	
"PMP_IV"	ICP violations (IV): count of errored, invalid or missing ICP cells, except during SES-IMA or UAS-IMA conditions	af-phy-0086.001: “imaLinkImaViolations”, “IV-IMA”	LR_Fragment of IMA link CTP
"PMP_LBC"	Laser BackFire Current (gauge)		
"PMP_LBC_AVG"	Laser BackFire Current Average (gauge)		
"PMP_LBC_MAX"	Laser BackFire Current Maximum (gauge)		
"PMP_LBC_MIN"	Laser BackFire Current Minimum (gauge)		
"PMP_LC"	dot3StatsLateCollisions Tx	RFC 2665	
"PMP_LIA"	count of the (successful or failed) line initialization attempts		LR_DSL
"PMP_LOFS"	count of loss of frame seconds		LR_DSL
"PMP_LOLS"	count of loss of link seconds		LR_DIGITAL_SIGNAL_RATE
"PMP_LOSS"	count of loss of signal seconds		LR_DIGITAL_SIGNAL_RATE

Name	Description	Source Standard	Layer rate
"PMP_LOSWS"	count of loss of sync word seconds		LR_DSL
"PMP_LPRS"	count of loss of power seconds		LR_DIGITAL_SIGNAL_RATE
"PMP_LSS"	Loss of Signal Seconds (counter)		LR_DIGITAL_SIGNAL_RATE
"PMP_MCF"	dot3StatsMultipleCollisionFrames Tx	RFC 2665	
"PMP_NPJ"	Negative Pointer Justification (counter)		
"PMP_OAM"	Count of OAM cells only that were received by the ATM Interface, only received	AF-NM-0020.001	LR_ATM_NI
"PMP_OCD"	Count of Out of Cell Delineation anomalies	GR 1248	LR_ATM_NI
"PMP_OCTECTS"	ifInOctets or EtherStatsOctets Rx ifOutOctets Tx	RFC 2863 or RFC 2819 RFC 2863	
"PMP_OI"	Unavailability events in the measurement period, Outage Intensity (counter)	G.827	
"PMP_OIF"	Count of OIF anomalies, except during SES-IMA or UAS-IMA conditions, near-end, received or transmitted	af-phy-0086.001: “imaLinkOifAnomalies”, “OIF-IMA”	LR_Fragment of IMA link CTP
"PMP_OPT_LBIAS"	Current Laser Bias Current (also known as Pump Current)		
"PMP_OPT_LBIAS_AVG"	Average Laser Bias Current during the interval		
"PMP_OPT_LBIAS_MAX"	Maximum Laser Bias Current during the interval		
"PMP_OPT_LBIAS_MIN"	Minimum Laser Bias Current during the interval		
"PMP_OPT_LBIASN"	Laser Bias Current Normalized, meter parameter = It specifies the current Laser Bias Current is a normalized percentage (normalization algorithms are NE-specific)		
"PMP_OPT_LBIASN_AVG"	Average Laser Bias Current Normalized during the interval		
"PMP_OPT_LBIASN_MAX"	Maximum Laser Bias Current Normalized during the interval		
"PMP_OPT_LBIASN_MIN"	Minimum Laser Bias Current Normalized during the interval		
"PMP_OPT_LTEMP"	Current Laser Temperature		

Name	Description	Source Standard	Layer rate
"PMP_OPT_LTEMP_AVG"	Average Laser Temperature during the interval		
"PMP_OPT_LTEMP_MAX"	Maximum Laser Temperature during the interval		
"PMP_OPT_LTEMP_MIN"	Minimum Laser Temperature during the interval		
"PMP_PAUSEFR"	dot3InPauseFrames Rx dot3OutPauseFrames Tx	RFC 2665 RFC 2665	
"PMP_PJE"	Pointer Justification Events (counter)	G.784, G.783	
"PMP_PKTS1019TO1513OCTETS"	etherStatsPkts1019to1513Octets Rx	RFC 2819	
"PMP_PKTS123TO250OCTETS"	etherStatsPkts123to250Octets Rx	RFC 2819	
"PMP_PKTS251TO506OCTETS"	etherStatsPkts251to506Octets Rx	RFC 2819	
"PMP_PKTS507TO1018OCTETS"	etherStatsPkts507to1018Octets Rx	RFC 2819	
"PMP_PKTS64OCTETS"	etherStatsPkts64Octets Rx	RFC 2819	
"PMP_PKTS65TO122OCTETS"	etherStatsPkts65to122Octets Rx	RFC 2819	
"PMP_PLCP_DS3_BIP"	Count of BIP errors	AF-NM-0020.001	LR_ATM_NI
"PMP_PLCP_DS3_FE"	Count of Framing Errors	AF-NM-0020.001	LR_ATM_NI
"PMP_PLCP_DS3_FEBE"	Count of far-end BIP errors detected	AF-NM-0020.001	LR_ATM_NI
"PMP_PPJ"	Positive Pointer Justification (counter)		
"PMP_PSC"	Protection Switch Count (counter)	G.774.1	
"PMP_PSD"	Protection Switch Duration (counter)	G.774.1	
"PMP_PSM_BBE"	Protected Section BBE (counter)		
"PMP_PSM_ES"	Protected Section ES (counter)		
"PMP_PSM_OI"	Protected Section OI (counter)		
"PMP_PSM_SES"	Protected Section SES (counter)		
"PMP_PSM_UAS"	Protected Section UAS (counter)		
"PMP_RPL"	Current Receive Power Level (Input Signal Power)		

Name	Description	Source Standard	Layer rate
"PMP_RPL_AVG"	Average Receive Power Level (Input Signal Power) during the interval		
"PMP_RPL_MAX"	Maximum Receive Power Level (Input Signal Power) during the interval		
"PMP_RPL_MIN"	Minimum Receive Power Level (Input Signal Power) during the interval		
"PMP_RPL_RLTS1"	Received Level below first Threshold Seconds (counter)	ETSI EN 301 129 and ITU-R F.750-4	
"PMP_RPL_RLTS2"	Received Level below second Threshold Seconds (counter)	ETSI EN 301 129 and ITU-R F.750-4	
"PMP_RPLN"	Received Power Level Normalized, meter parameter = The received optical power expressed as a normalized percentage (normalization algorithms are NE-specific)		
"PMP_RPLN_AVG"	Average Received Power Level Normalized during the interval		
"PMP_RPLN_MAX"	Maximum Received Power Level Normalized during the interval		
"PMP_RPLN_MIN"	Minimum Received Power Level Normalized during the interval		
"PMP_RSQ"	Received Signal Quality Indicator, meter parameter = a measure of the signal quality measured at the facility port input, expressed as unit-less ratiometric value		
"PMP_RSQ_AVG"	Average Received Signal Quality Indicator during the interval		
"PMP_RSQ_MAX"	Maximum Received Signal Quality Indicator during the interval		
"PMP_RSQ_MIN"	Minimum Received Signal Quality Indicator during the interval		
"PMP_SBLE"	dot3StatsSymbolErrors Rx	RFC 2665	
"PMP_SCF"	dot3StatsSingleCollisionFrames Tx	RFC 2665	
"PMP_SEF_AISS"	Severely Errored Frame (SEF)/Alarm Indication Signal (AIS) Seconds	ANSI T1.231	
"PMP_SEFS"	(counter)	ANSI T1.231	
"PMP_SEP"	Severely Errored Period (counter)	G.828	
"PMP_SEPI"	SEP Intensity (counter)	G.828	
"PMP_SES"	Severely Errored Seconds (counter)	G.826 for PDH G.828 for SDH paths G.829 for SDH sections	

Name	Description	Source Standard	Layer rate
	Count of near-end or far-end severely errored seconds, received or transmitted	af-phy-0086.001: “imaLinkNeSevErroredSecs”, “SES-IMA”, “imaLinkFeSevErroredSecs”, “SES-IMA-FE”	LR_Fragment of IMA link CTP
"PMP_SESR"	SES Ration (counter)	G.826	
"PMP_SFRAGS"	etherStatsFragments Tx	RFC 2819	
"PMP_SJABBERS"	etherStatsJabbers Tx	RFC 2819	
"PMP_SNR"	Signal Noise Ratio		
"PMP_SNR_AVG"	Average Signal Noise Ratio during the interval		
"PMP_SNR_MAX"	Maximum Signal Noise Ratio during the interval		
"PMP_SNR_MIN"	Minimum Signal Noise Ratio during the interval		
"PMP_SOPKTS"	etherStatsOversizePkts Tx	RFC 2819	
"PMP_SQETST"	dot3StatsSQETestErrors Rx	RFC 2665	
"PMP_STUFF"	Count of stuff events inserted in the receive or transmit direction	af-phy-0086.001: “imaLinkTxStuffs”, “Tx-Stuff-IMA”, “imaLinkRxStuffs”, “Rx-Stuff-IMA”	LR_Fragment of IMA link CTP
"PMP_SUPKTS"	etherStatsUndersizePkts Tx	RFC 2819	
"PMP_TCM_BBE"	Tandem Connection Monitoring BBE (counter)	G.784. G.783	
"PMP_TCM_ES"	Tandem Connection Monitoring ES (counter)	G.784, G.783	
"PMP_TCM_LEVEL<n>_BBE"	Tandem Connection Monitoring Level <n> BBE (counter), <n> = 1 | 2 | 3 | 4 | 5 | 6	G.874. G798	
"PMP_TCM_LEVEL<n>_ES"	Tandem Connection Monitoring Level <n> ES (counter), <n> = 1 | 2 | 3 | 4 | 5 | 6	G.874. G798	
"PMP_TCM_LEVEL<n>_SES"	Tandem Connection Monitoring Level <n> SES (counter), <n> = 1 | 2 | 3 | 4 | 5 | 6	G.874. G798	
"PMP_TCM_LEVEL<n>_UAS"	Tandem Connection Monitoring Level <n> UAS (counter), <n> = 1 | 2 | 3 | 4 | 5 | 6	G.874. G798	
"PMP_TCM_OUT_BBE"	Tandem Connection Monitoring outgoing BBE (counter)	G.784, G.783	

Name	Description	Source Standard	Layer rate
"PMP_TCM_OUT_ES"	Tandem Connection Monitoring outgoing ES (counter)	G.784, G.783	
"PMP_TCM_OUT_SES"	Tandem Connection Monitoring outgoing SES (counter)	G.784, G.783	
"PMP_TCM_OUT_UAS"	Tandem Connection Monitoring outgoing UAS (counter)	G.784, G.783	
"PMP_TCM_SES"	Tandem Connection Monitoring SES (counter)	G.784, G.783	
"PMP_TCM_UAS"	Tandem Connection Monitoring UAS (counter)	G.784, G.783	
"PMP_TES"	count of time elapsed seconds, i.e. number of seconds that have elapsed since the beginning of the current PM period		LR_DSL
"PMP_TPL"	Current Transmit Power Level (Output Signal Power)		
"PMP_TPL_AVG"	Average Transmit Power Level (Output Signal Power) during the interval		
"PMP_TPL_MAX"	Maximum Transmit Power Level (Output Signal Power) during the interval		
"PMP_TPL_MIN"	Minimum Transmit Power Level (Output Signal Power) during the interval		
"PMP_TPL_TLTS1"	Transmitted Level greater than Threshold Seconds (counter)		
"PMP_TPL_TLTS2"	Transmitted Level greater than second Threshold Seconds (counter). Optional		
"PMP_TPLN"	Current Transmit Power Level (Output Signal Power)		
"PMP_TPLN_AVG"	Average Transmit Power Level (Output Signal Power) during the interval		
"PMP_TPLN_MAX"	Maximum Transmit Power Level (Output Signal Power) during the interval		
"PMP_TPLN_MIN"	Minimum Transmit Power Level (Output Signal Power) during the interval		
"PMP_UAS"	Unavailable Seconds (counter)	G.826	all layers
	Count of one second intervals where the Traffic State Machine of this IMA Group is down, near-end received or transmitted	af-phy-0086.001: “imaGroupUnavailSecs”, “GR-UAS-IMA”	LR_Fragment of IMA group FTP
	Count of near-end or far-end unavailable seconds, received or transmitted	af-phy-0086.001: “imaLinkNeUnavailSecs”, “UAS-IMA”, “imaLinkFeUnavailSecs”, “UAS-IMA-FE”	LR_Fragment of IMA link CTP

Name	Description	Source Standard	Layer rate
"PMP_UCASTPKTS"	ifInUcastPkts Rx ifOutUcastPkts Tx	RFC 1213 RFC 1213	
"PMP_UPC_NPC[<qualifier>]"	Count of cells passed by the policing function, only transmitted	AF-NM-0020.001	LR_ATM_VP LR_ATM_VC
"PMP_UPC_NPC_DIS[<qualifier>]"	Count of cells discarded by the policing function due to traffic descriptor violations	AF-NM-0020.001	LR_ATM_VP LR_ATM_VC
"PMP_UPC_NPC_TAG"	Count of cells tagged by the policing function	AF-NM-0020.001	LR_ATM_VP LR_ATM_VC
"PMP_UPROTOS"	ifInUnknownProtos Rx ifOutUnknowProtos Tx	RFC 1213 RFC 1213	
"PMP_UUS"	Count of receive or transmit unusable seconds at the near-end or far-end	af-phy-0086.001: "imaLinkNeTxUnusableSecs", "Tx-UUS-IMA", "imaLinkNeRxUnusableSecs", "Rx-UUS-IMA", "imaLinkFeTxUnusableSecs", "Tx-UUS-IMA-FE", "imaLinkFeRxUnusableSecs", "Rx-UUS-IMA-FE"	LR_Fragment of IMA link CTP

Note: <n> = 1 | 2 | 3 | 4 | 5 | 6
<qualifier> => CLP0: = "_0"; CLP01: = "_0+1"

Note:
It is possible, that one Termination Point is physically located in two distinct located network elements (refer to DSL modelling as an example). The Performance Monitoring Points of this TP may supervise the same performance parameter in the local and in the remote network element.
In order to differentiate these two performance parameters, a prefix "RU_" (RU for Remote Unit) has to be used in the Name of the performance parameter.
e.g. PMP_UAS → RU_PMP_UAS.

Performance parameters added for Version 3.0 are in blue.