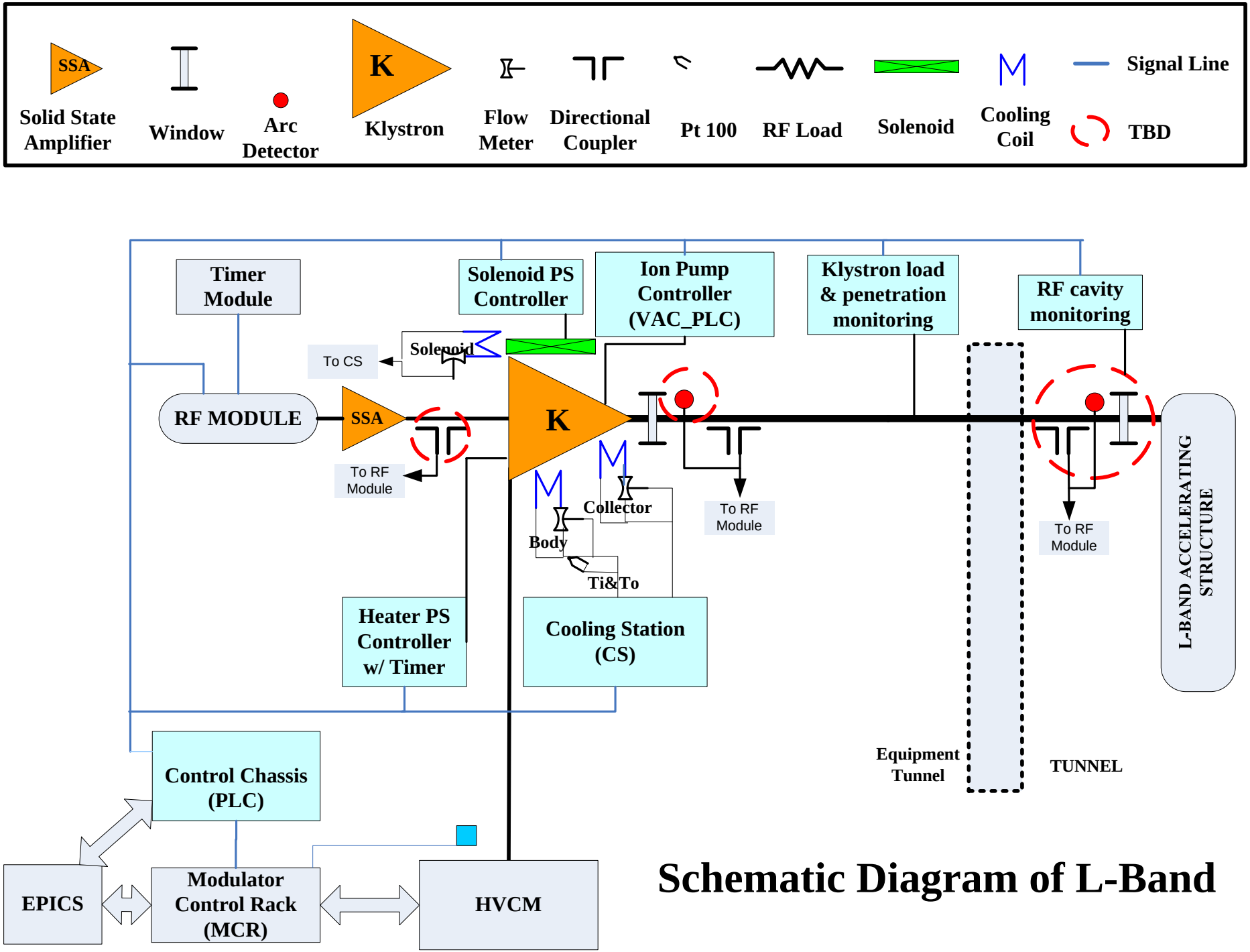
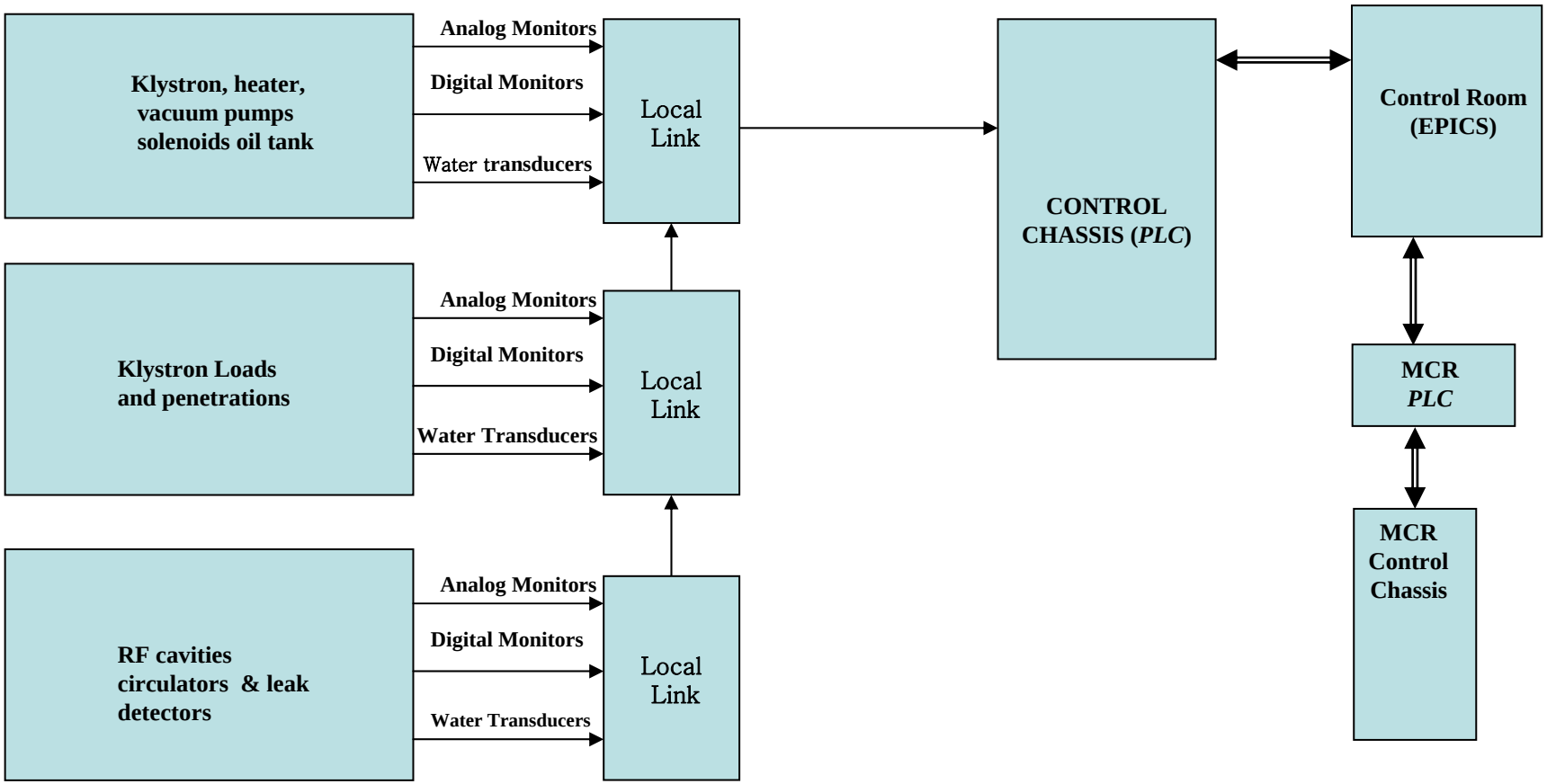


Schematic Diagram of L-Band

Interconnection Diagram



Interconnection using local links to reduce wiring

ILC Klystron monitoring	analog	Digital	outputs	transducer
Klystron monitors				
Collector Temperature	8	1		
Collector Flow Rate		6		6
Window Arc Detector		2		2
body Temperature, water flow	12	1		1
Gun Temperature	12			
Heater Voltage, Current	2			
Heater Delay		1		
Focusing Coil (Solenoid) Voltage, Current, flow	2	4		1
oil, Temperature	1	1		
Klystron Ion Pump Voltage Current	1	2		
Klystron Load combiner	2	3		
Penetration cooling	3	3		
	43	24		10
	6ea 8ch	2ea 16ch	2 remote link	
RF equipment ?				
RF Cavities		48		
Circulators	24	48		
	3ea 8ch	6ea 16ch	2 remote link	
Equipment Protection				
Emergency off		1	1	
Equipment enable		6	6	
Fire			1	
RF leaks		1	1	
		1ea 16ch	1 remote link	

Breakdown of control monitoring points

each	Item	type	cost each	Sub total
1	PLC Controller	Material	$950	$950
2	DCM	Material	$720	$1,440
1	Frame & PS	Material	$1,800	$1,800
1	display Unit	Material	$1,600	$1,600
1	chasses	labor	$2,500	$2,500
5	remote links	Material	$440	$2,200
9	8ch analog	Material	$626	$5,634
9	16 channel digital	Material	$490	$4,410
10	flow transductions	Material	$280	$2,800
5	Din rail assembly	Labor	$500	$2,500
207	wiring	Labor	$85	$17,595
	Cost pert klystron			$43,429

First cut on costs per ILC station of monitoring only