G.PAK Configuration Worksheet

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1. Introduction

This worksheet is to be used when submitting a G.PAK configuration to the engineering team for custom builds and for feasibility analysis. During a feasibility analysis, the options are selected using the worksheet. If a processor is specified in the feasibility analysis, the result of the analysis is channel density per chip. If the channel density per chip is specified, the result of the analysis is the appropriate processor selection.

Note that in some systems, the number of channels is not necessarily a constant. For example, a system may support 128 channels of G.711, but only up to 32 channels of G.729AB. This could be done to allow the use of a lower priced DSP. Similarly, the same system may support only 2 channels of T.38 fax relay. If your system makes this type of tradeoff, please make appropriate notes in the related tables.

The word “Include” is defined as follows. If your product requires this algorithm or option, you want it included and should therefore indicate so by entering “Y” or “YES”. Otherwise, enter “N” or “NO”.

2. Configuration Tables

Company Name	
Requestor Name	
Date	

Select Desired Processor C6424, C6452, C6472, C6416, DM642, C6412 C5402, C5410, C5416, C5420, C5421, C5441 C5502, C5507, C5510, OMAPL138, C6472, C6748	
Select processor speed (MHz)	
External memory supplied (KBytes)	
Select number of Channels per chip	
Select number of Channels per system	
Include packet to packet bridging (Y or N)	
Include TDM to TDM channels (Y or N) Full Duplex(F) or Half Duplex (H)	
Number of background transcoders	

Automatic Gain Control	
Include (Y or N)	
Maximum instance count	

VAD/CNG	
Include (Y or N)	

Tone Detection	
Number of channels requiring tone detection	
Detect tone from both directions (Y or N)	
Include DTMF (Y or N)	
Include MF R1 (Y or N)	
Include MF R2 Fwd (Y or N)	
Include MF R2 Rev (Y or N)	
Include Call Progress (Y or N)	
Include FAX Tones (Y or N)	
Include Tone Relay (AAL2, RFC 2833/4733:Event or None)	
Number of simultaneous tone types	
Include Arbitrary Tone Detect (Y or N) / If yes, Number of configurations	

Tone Generation	
Number of channels requiring tone generation	
Report inbound tone relay packets to host (Y or N)	
Generate tone from tone relay packets (Y or N)	

G.726 ADPCM Waveform Coder	
Include G.726 (Y or N)	
Enable 16 kbps Rate	
Enable 24 kbps Rate	
Enable 32 kbps Rate	
Enable 40 kbps Rate	

G.711	
Include G.711 (Y or N)	

G.729AB Vocoder	
Include G.729AB (Y or N)	

G.723.1 Vocoder	
Include G.723.1 (Y or N)	

G.728 Vocoder	
Include G.728 (Y or N)	

Speex Vocoder	
Include Speex (Y or N)	
Narrowband (Y or N)	
Wideband (Y or N)	

iLBC Vocoder (Future Enhancement)	
Include iLBC (Y or N)	

GSM AMR Vocoder	
Include AMR	

G.722 Vocoder	
Include G.722 (Y or N)	

G.722.1 Vocoder	
Include G.722.1 (Y or N)	

G.722.2 Vocoder	
Include G.722.2 (Y or N)	

MELPe Vocoder	
Include MELP (Y or N)	

T.38 Fax Relay	
Include Fax Relay (Y or N)	
Number of channels requiring FAX relay	

PCM Echo Cancellation	
Include PCM EC (Y or N)	
Max Tail Length (8..128) (msec)	
Max Reflectors (1..3)	
Max Reflector Length (4..16) (msec)	

Packet Echo Cancellation	
Include Packet EC (Y or N)	
Max Tail Length (8..384) (msec)	
Max Reflectors (1..3)	
Max Reflector Length (4..16) (msec)	

Acoustic Echo Cancellation	
Include AEC (Y or N)	
Maximum Tail Length (msec)	
Maximum speaker – mic coupling	

Conferencing	
Include Conferencing (Y or N)	
Max Parties per Conference	
Conferences per Chip	
Narrowband (Y or N)	
Wideband (Y or N)	
Mixed Narrowband/Wideband (Y or N)	

RTP (RFC3550)	
RTP (DSP/Host/None)	
RTCP (DSP/Host/None)	
Secure (Y/N)	
Max jitter size (msec)	

TCP/UDP/IP	
TCP (DSP/Host/None) (Future Enhancement)	
UDP (DSP/Host/None)	
DHCP (DSP/Host/None)	

Serial Port Configuration (Please attach timing diagram)	
Number of TDM serial ports	
List serial devices attached to TDM lines (McBSP0, McBSP1, TSIP0, TSIP1,…)	
Number of Slots on each TDM Stream	
Maximum number of slots used per TDM stream	
Frame Sync Polarities (Active High or Active Low)	
Clock Polarities (Tx falling edge or Tx rising edge)	
Clock delay after frame sync for first bit (0-2)	
Companding mode (mu-law, A-law, 8-bit linear, 16-bit linear)	
Timing Diagram Attached?	

Host/DSP Messaging Method	
HPI (Y or N)	
PCI (Y or N)	
Ethernet (Y or N)	

Caller ID	
Number of channels receiving caller ID	
Number of channels transmitting caller ID	
Fsk Type (V.23 or Bell 202)	
Type 1 (Y or N)	
Type 2 (Y or N) (Future Enhancement)	

Additional Selections	
List all desired frame sizes (1, 2.5, 5, 10, 20, 30 msec)	